June 11, 2001

INSIDE

Gov't proposal to withhold spectrum for rule breakers raises industry's ire

The wireless industry is cautioning **Industry Canada** to avoid tough enforcement measures when it comes to ensuring that companies comply with the conditions of their spectrum licences. In particular, licensees are objecting to the introduction of what they describe as a powerful new enforcement tool – one that would prohibit non-compliant carriers from participating in a spectrum auction. Earlier this year, the department issued a call for comments on the idea (RoW, March 5/01).

The **Canadian Wireless Telecommunications Association** (CWTA) says the government should use the sanctions it already has in place instead of introducing new ones.

"Revocation or suspension of licence and prosecution under the *Radiocommunication Act* are both extreme measures, which the Department has been properly reluctant to dep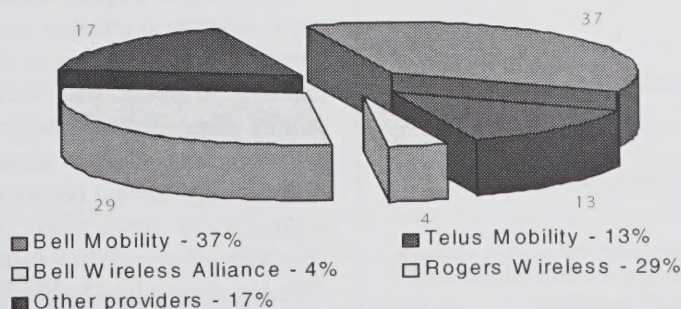loy in the past, except in the face of fla-grant and serious non-compliance," David Farnes CWTA's VP industry and regulatory affairs writes in a May 18 intervention to Industry Canada. "However, the consequences for a wireless telecommunications company of being foreclosed from even bidding for spectrum at auction are also extremely serious."

The CWTA also suggests that some licence conditions are more important than others, and that, in essence, the punishment for non-compliance should be commensurate with the infraction. Any sanctions, it notes, should be "proportional to the degree to which a licensee is non-compliant."

In its call for comments, Industry Canada is specifically reviewing what are referred to as Category 3 conditions. They include public interest conditions, including lawful in-

**Paging market revenue by service provider, 1999
(market share based on number of pagers)**

- Bell Mobility - 37%
- Telus Mobility - 13%
- Bell Wireless Alliance - 4%
- Rogers Wireless - 29%
- Other providers - 17%

The paging market in Canada is dominated by Bell Mobility and Rogers Wireless.

Source: Telecommunications Services in Canada: An Industry Overview 1999-2000, Industry Canada, May 2001.

terception capabilities, research and development investment, implementation of service and network deployment. Enforcing Category 1 (i.e. technical requirements) and Category 2 (i.e. foreign ownership limits) aren't a concern for the government. The department acknowledges however that keeping tabs on the third group of conditions has been a problem.

But as the CWTA points out, Category 3 conditions are often tied to the ups and downs of the market and the government should allow for some flexibility in this area. For example, the association points out that building out a national network is subject to many variables, including the availability of equipment, access to antenna sites, access to affordable financing, and the ability of the market in each location to support the number of licensees required to offer service in that location.

Microcell Telecommunications Inc also worries that taking away a company's ability to bid for more spectrum is too severe a punishment. "In Microcell's submission, the Category 3 public interest licence conditions are the least appropriate grounds on which to base a decision to bar a licensee from applying to participate in an auction," Microcell's director of regulatory affairs Dennis Béland writes in a May 18 submission.

Microcell was one of seven groups to respond to Industry Canada's call for comments.

While the majority of intervenors supported the department's efforts to deal with the non-compliance issue, they questioned the fairness and effectiveness of withholding spectrum.

According to **Rogers Wireless Inc**, the key to effective regulation and continued growth of the industry is flexibility on the part of government. "It's critical that licensees be afforded the flexibility to address market changes, especially when they lead to results that go beyond requirements of the original licence commitments," writes Dawn Hunt, VP regulatory affairs at the wireless telco. "The department should take a purposive approach to compliance rather than an assessment of technical compliance."

The CWTA says if a company hasn't lived up to its licence conditions then the department should adopt a four-pronged approach. The company should be given timely notice of the situation. If an allegation of non-compliance is made by a third party, the alleged company should receive a full disclosure of the allegation. Information that is confidential should remain that way and the company should be afforded an adequate amount of time to respond to the case and get it resolved before the competitive process.

Compliance should not be extended to affiliated companies

Industry Canada is also asking if the sanctions on one company should apply to its affiliated companies. For example, should **Bell Canada** be prevented from bidding in a spectrum auction if one of its affiliates in the Maritimes is found to be non-compliant? Not surprisingly, considering the level of consolidation in the Canadian telecom market, most intervenors say the proposed sanction shouldn't be extended. Their rationale? Affiliated companies are traditionally controlled by their management team and operate their networks.

Telesat Canada's VP corporate development, Paul Bush, writes that "rather than a blanket requirement on all licences, the company would suggest that the department extend this requirement on a case by case basis to cover only those licensees and their affiliates where a concern has been identified with that affiliated group of companies and/or a record of non-compliance where category 3 conditions exists."

Bell Mobility's Don Woodford agrees, but adds that not all of the companies in an affiliated group will have the same spectrum requirements at the same time. For example, companies in the **Bell Wireless Alliance** will have different needs if their network covers a highly populated urban region than a carrier whose network covers a vast rural area.

"The Bell Wireless Alliance submits that only those affiliates which are applicants in such a future licensing process should be required to provide compliance attestations," Woodford writes.

RoW

Featured articles from Report on Wireless this year:

May 28, 2001 All signs point to upcoming review of telecom foreign ownership rules
Government tables $12.5-billion wish list of new spending
Capex spending & reenue on rise in wireless telecom industry

April 30, 2001 Western hemisphere needs to band together for larger voice at ITU
CITEL to focus on WRC-03, band harmonization in the Americas

April 17, 2001 Broad policy review pending for PCS & land-mobile spectrum
Spectrum shortage in U.S. opens new markt for Ottawa company

April 3, 2001 Decima poll reveals Canadians split over use of cell phone jammers
Immigration laws, talent pool lure San Jose R&D firm to Toronto

March 19, 2001 WaveRider gains entry into U.S. market with FCC approval of LMS 3000
Microcell to rollout E9111 in Alberta and BC

March 5, 2001 Paradigm hires major U.S. law firm to enforce wireless location patent
Canaisn urge FCC to pick 1700 MHz band for 3G

Feb. 19, 2001 BCE's new investment arm to fund emerging wireless Internet ventures
Microcell and Inukshuk ready for major network builds this year

Feb. 5, 2001 Revamping spectrum rules could free up 29 FM channels in Toronto
Canada opens spectrum for vehicle radar, high-capacity communications

Jan. 22, 2001 Outlook for CAPEX spending better in Canada than U.S.
Western Canadians have greatest access to cell phones

Jan. 9, 2001 Wi-LAN, Cisco team up to fight FCC denial of licence-exempt devices
Canada to award two licences for 118.7 orbital slot

Who Reads Report on Wireless?

Elected officials, senior bureaucrats
Communications regulators
Foreign embassies and governments
Senior executives from Canada and abroad
Financial analysts

Venture capitalists
Investment fund managers
Property developers/landlords
Industry consultants, lawyers, associations
Universities and colleges
Research Institutes
Public interest organizations

MDSI brings back Eric Dysthe as CEO to help implement restructuring plan

Mobile Data Solutions Inc (MDSI) has brought back one of its founders to guide the company's financial recovery after several quarters of high costs and lower than expected revenues. The return of Eric Dysthe as chair and CEO was one of several sweeping changes made last month to the executive ranks and operations of the Richmond BC-based company (RoW, May 14/01).

Dysthe cites several reasons for the company's financial woes – losing touch with customer needs and becoming too inward as a company. A delay in the launch of MDSI's latest mobile workforce management system by about one year also contributed to the problems. The *Advantex r7* was based on a completely new design and open architecture which took longer than anticipated to be completed, he explains.

Expenses out grew revenue

"One of the problems I had with the company was that growth hadn't been there in the last couple of years," says Dysthe, who served as CEO of MDSI from 1993-1996. "Part of that was due to the *Advantex r7* being delayed, but in the meantime expenses had gotten totally out of whack with the revenue coming in."

By 1998, the company had grown to about 420 employees with annual revenue of approximately US$48.4 million and a net income of US$3.78 million. At the end of FY00 and before restructuring began, revenue hit US$61.5 million with a loss of US$554,000 with an employee base of about 600. The results didn't sit well with the board. "We knew we had to take some pretty drastic measures," Dysthe told *Report on Wireless*.

The first order of business was to put Dysthe back in the driver's seat and promote Jerry Chan to the position of president and COO. The next step was to take a broad review of the company to identify how to bring costs more in line with revenue. As part of its restructuring plan, MDSI plans to gradually cut spending this year, resulting in an estimated $2.9 million in cost reductions per quarter by the first quarter of 2002. The biggest cuts have been in staffing, with a 25 per cent reduction in the overall workforce.

The strategy also calls for a return to basics with a renewed focus on the customer.

"We have always strived to provide better products and services than anybody else in the industry and we wanted every customer to be a good reference," says Dysthe. "Unfortunately, we're not in that position today, but we bloody well will be again I can assure you."

Pieces of the restructuring puzzle almost all in place

The company hopes to have its expenses under control by the end of the year. Savings of US$2.9 million per quarter, announced in the restructuring plan, will be realized throughout the rest of the year through the gradual reduction of its workforce.

Taking a hands-on approach to sales and new revenue streams is expected to take up a lot of the chair's day. "I've always been very customer focused in my approach and I think that this company had lost that, so I'm going to make sure that we get back to that again," he explains.

With most elements of the restructuring plan now in place, Dysthe is optimistic that things will turnaround for the company. "I think that the company is better positioned today than we ever have been in terms of the products that we have today with the *Advantex r7* ASP model and the e-Service model as well," he says. "We can provide the full functionality of the *r7* from the very biggest of enterprise stand-alone systems for very big telcos and utilities to the very smallest on the hosted system."

The prospect of being able to work with big partners such as Acenture and IBM is also a boon to the company, says Dysthe, adding that the new standards-based open architecture of the *Advantex r7* enables these partnership agreements. Additionally, the ASP model should allow MDSI to expand the customer base by having companies that don't want to make the capital investment in infrastructure purchase the solution.

RoW

Lumic signs chip manufacturing agreement

Ottawa-based fabless semiconductor **Lumic Electronics** has signed a production agreement with **Infineon Technologies**. Lumic will gain access to both Infineon's manufacturing capacity and advanced embedded DRAM technology for the production of its multimedia processors. This new generation of chips will enable a wide variety of mobile devices to handle rich media content including streaming video.

Wi-LAN receives official OFDM certification

Wi-LAN Inc has received the official certification for the sale of OFDM-based equipment in the U.S. by the **Federal Communications Commission**. The approval makes Wi-LAN the first company certified to sell products in the 2.4 GHz band that have incorporated the patented OFDM technology. Specifically, the company will be able to sell its *BWS 300-24* product line, although it opens the door to other products in the same band.

Voice Mobility finalizes contract in Malaysia

Voice Mobility International Inc, Vancouver, has ratified a three-year contract with **Haddad Advanced technology Company Malaysia**. The deal gives Voice Mobility significant access to the Malaysian market. The contract sets a first-year target of 100,000 users and includes a minimum of 6,000 mailboxes per month. Once the platform is deployed, it is expected to generate revenue between $6 and $10 million. The agreement guarantees revenue of $1.3 million over the three-year deal.

Cell-Loc enters into long-term contract with Brazilian partner

Calgary-based **Cell-Loc Inc** has signed a memorandum of understanding (MOU) with telecommunications systems integrator, **Amapri Telecom** for the roll out of *Cellocate* in South America. The five-year build-out program has a potential value of more than US$60 million and provides Amapri with the exclusive rights to *Cellocate Beacon*-enabled location-based services in the South American market. Cell-Loc does, however, retain the rights to offer location-based services through other wireless devices that integrate Cellocate technology. The first milestone will be the completion of the network in Sao Paulo by July 2002.

Storm Internet acquires Perth-based ISP

Storm Internet Services Ltd, Ottawa, has announced its intention to acquire Perth ON-based ISP **Superaje Communications**. The proposed acquisition strengthens Storm's ability to serve eastern Ontario and will provide high-speed service to more than 3,000 of Superaje customers. Storm, an **International Datacasting Corp** subsidiary, will gain Superaje's ability to serve non-urban customers and its use of microwave technologies.

Unique Broadband unveils OFDM-based chip

Concord ON-based **Unique Broadband Systems Inc** has completed development on an application specific integrated circuit (ASIC) incorporating the core functionality in COFDM modulation. The ASIC was initially developed for the company's proprietary *COFDM DVB-T* modulator and modem, it will be able to support a wide range of applications in the broadband wireless market.

Sierra Wireless and Citrix form strategic relationship

Sierra Wireless Inc and **Citrix Systems Inc** have formed a strategic alliance to deliver business applications running on *Citrix MetaFrame* servers over wireless networks to users on virtually any client device. Citrix software supports the current line of *AirCard 300, 400* and *510* wireless network cards and will support future iterations. Key terms of the agreement include compatibility testing and joint marketing and sales initiatives.

OA Group commits to R&D with TRTechnologies

Edmonton-based **OA Group Inc** has entered into a wireless R&D project with **TRTechnologies**, a subsidiary of TRLabs. The project will focus on developing applications using the *Bluetooth* protocol. OA Group's Internet subsidiary will also work with TRT to develop applications and enhance the short-range wireless communications standard. *Bluetooth* is considered a wire replacement technology for printers, keyboard, mice and hands-free devices for cell phones.

01 Communique introduces new wireless unified communications application

O1 Communique Laboratory Inc has taken wireless messaging to the next level with a unified communications service that makes multimedia functionality an inherent part of the system. The service – *I'm InTouch* – gives subscribers access to a single mail box that can open and view various types of attachments, including audio and video files, from a variety of mobile devices. The system supports more than 200 different file types.

Andrew Cheung, president and CEO at 01 Communique, describes its latest product offering as a personal data gateway that enables mobile users to stay in touch with the office from different locations. To be able to open and read a *pdf* file, spreadsheet or *MS Word* document on a wireless device – as you would from a desktop computer – is considered a breakthrough in unified communications.

The company tested the product on several types of mobile devices to ensure the potential subscriber base was as large as possible. Currently, **Research in Motion**'s *BlackBerry* device, the *Palm Pilot* line, **Handspring**'s *Visor* and WAP-enabled cell phones are supported by the *I'm InTouch* service.

The service is aimed at the small office and home office (SOHO) and the small- and medium-sized enterprise (SME) markets. Later this summer, a more robust version for the large enterprise market will hit the market. It sells for $9.95/month or $99.95/year and users can download the appropriate version from the company's website.

The Mississauga ON-based company plans to augment sales through a variety of channels. First it will encourage its five million existing subscribers to upgrade to the newer version, explains executive VP Brian McElwain. The firm will also beef up its direct sales force and begin using value-added resellers (VAR).

The VAR sales channel is considered strategic to the company's longterm growth. VAR representatives offer the technical expertise and the ability to go after vertical markets. Less emphasis will be put on its direct sales team, although it will still play an important

role in expanding the subscriber base, explains McElwain.

The key to the wide-spread deployment of such a system is to partner with both the device manufacturers and service providers. McElwain says a big effort will go into partnering with the carriers to bundle the software with devices and then pursue a co-marketing/co-selling type of strategy.

The ultimate goal is to entice subscribers with compelling applications, explains Kerry Munro VP marketing at 01 Communique. "This is something that not only augments technology, it dovetails (to) a way of life," he says.

The company is increasingly tying its future profitability to a service provision model – one that relies on recurring monthly revenue from the *I'm InTouch* model, rather than the more volatile shrink-wrap retail market. While 01 Communique won't exit the retail market completely, it wants to rely much less on it going forward, explains Cheung.

No competing against RIM's BlackBerry handheld

The granting of a patent to Research in Motion for its single mailbox function within the *BlackBerry* email system doesn't present any liabilities for the company, says Cheung. 01 Communique's patent-pending process is one that is based on a "pulling" technology rather than a "pushing" on which RIM's patent is based.

Via a Linux-based server, the system finds the PC and connects to the wireless device, explains Cheung. As a result, he says, the two technologies complement each other.

RoW

Commission denies Telesat, TMI request to review and vary contribution

The CRTC has rejected a review and vary petition from **Telesat Canada** and **TMI Communications** requesting that they be exempt from having to pay into the new national phone subsidy fund. This latest denial (*Order CRTC 2001-435*) once again demonstrates that when it comes to the new contribution regime, the commission is steadfast in its belief that it should apply equally to all tele-communications services providers.

Telesat had asked the CRTC to exempt it, and its TMI subsidiary, from having to pay into the national pool to subsidize local phone service in rural and remote areas. One reason, it argued, is that a significant amount of its satellite capacity goes to serve the same regions served by telcos that can draw from the subsidy fund. Telesat said if its exemption request was denied, then it should be allowed to tap into the subidies.

Telesat, supported by the broadcast community, also argued that paying into such a fund was unfair since the majority of its customers are in the television and not the public switched telephone business. As well, the company pointed out that it's subject to other terms and conditions as part of its licence that should be taken into account, such as providing capacity for public institutions in remote areas.

But the CRTC didn't share Telesat's view. In its May 31 decision, the commission said that Telesat's conditions of licence are similar to spectrum licence fees paid by the wireless industry. "The Commission stated in *Order CRTC 2001-219* that conditions of licence should not entitle a TSP (a telecommunication service provider) to special treatment and that such obligations are a cost of doing business," the commission write.

Nor did the commission bite on Telesat's assertion that it would have to pass along the additional charge to its broadcast customers. The CRTC concluded that revenue-based charges would not impose unjust discrimination, undue preference or unreasonable advantage contrary to sections 27 (2) and 28 (1) of the *Telecommunications Act*. Under section 28 (1), "this section applies only when the commission is considering whether a Canadian carrier has conferred an undue preference or has unjustly discriminated in relation to the provision of a telecommunications service that involves the transmission of programs," the CRTC writes.

In concluding, "the commission considers that approving the applicants' application would negate the principles of ratepayer equity, fairness, technological neutrality and competitive equity that the commission sought to achieve with the national revenue-based contribution mechanism."

> "The Commission stated in *Order CRTC 2001-219* that conditions of licence should not entitle a TSP (a telecommunication service provider) to special treatment and that such obligations are a cost of doing business."
>
> CRTC

Much of the concerns with the contribution regime, which came into effect in January, should be allayed following the commission's decision on restructured bands and revised local loop rates in *Decision CRTC 2001-238*. In that decision, the CRTC lowered the year-two rate under the contribution rules to 1.5 per cent of contribution eligible revenue.

Decision 2001-238 should also alleviate some of the independent telcos' fears that they will be paying too much into the national contribution pool. In their appeal to Cabinet, they ask the **Federal Cabinet** to change the way telecommunications service revenue is calculated and then charged.

Respondents to the Cabinet appeal argued that the independent telcos haven't even yet come under the new revenue-based model and are still under the old long-distance method. They say the rural telcos won't become regulated by the new model until next year when the rate is reduced to the 1.5 per cent level.

RoW

Spotwave lands financing, extends coverage of networks

Ottawa-based Spotwave Wireless recently closed a $3-million round of financing enabling the company to continue development of its cell phone network extension technology. The emerging start-up aims to fill in gaps in coverage from the various carriers by strategically placing antenna that boost the RF signal into areas previously unreachable. Spotwave hopes to land another $10-$15 million in financing by this fall.

Rogers Wireless launches airtime sharing program

Rogers Wireless Inc has introduced a new program that will give multiple users access to the same pool of airtime minutes each month. The *Rogers AT&T Fair Share Plan* is designed to balance the needs of heavy-to-low airtime users. As well, users on this plan will enjoy free incoming local calls from users on the same plan. The *Rogers AT&T Self-Adjusting Plan* provides flexibility to business customers by offering the best minute rate each month despite changes in the number of minutes used each month. The pricing changes depending on the number of minutes used each month. An example is a month where a lot minutes were used would have a lower per minute rate that a low usage month.

COM DEV completes testing of M/ERGY at 120 km/h

COM DEV International Ltd successfully tested its next generation wireless access system at speeds of 120 km/h. The system supported data throughput rates of 2.45 Mbs and was capable of multiple email messages over the Internet. The company is on track to introduce *M/ERGY* on a commercial basis in 2002Q1.

Norsat International gets money from Industry Canada

Norsat International Inc, Burnaby BC, has received $9.4 million from Industry Canada's *Technology Partnerships Canada* investment program. Norsat will use the funding to develop the underlying technology for next generation satellite interactive terminals. The new terminals will allow for high-speed two-way Internet access to PCs at speeds 10 times faster than current modem technologies.

James Duncan and Ron Leslie have been appointed to the board of directors at C-COM Satellite Systems Inc, Ottawa. Duncan replaces Antoine Karam who has resigned. Duncan is the principal at Eurodata Support Services Inc, a third party hardware and software support organization. Leslie, current C-COM CFO, is a partner with Phomin, Leslie LLP, Chartered Accountants. He previously worked at KPMG in Ottawa.

Charles Hoffman, CEO at Rogers Wireless Inc, has announced his resignation from the firm effective June 30 and will be replaced by current president and COO Nadir Mohamed, a 20-year telecommunications industry veteran. He joined the firm last August allowing Hoffman to devote more time to corporate strategy. Hoffman has accepted a job as CEO at DSL wholesaler Covad Communications replacing Frank Marshall. He led the wireless operator through a difficult period and built the company into a premier wireless service provider with a national network that covers more than 90 per cent of Canada's population.

Apogee Networks has named Nina Aversano as executive VP of worldwide field operations. She will oversee the company's global sales force as well as business development and client services. Prior to joining Apogee, Aversano held various senior level sales and marketing positions at Lucent Technologies and AT&T Corp that spanned 24 years. She served as president of the North American region for Lucent's service provider networks group where she led a team of more than 3,000 sales and marketing professionals that delivered systems, software, services and support to communications providers across Canada and the U.S.

Mike Shepley has been appointed director of finance at Comlink Systems, Oshawa ON. He is a chartered accountant with several years of experience gained in the cable television industry. In addition to his financial responsibilities, he was involved in many other operational aspects of the business including new business development, customer relations, marketing and strategic planning.

CWTA hopes to expand ranks & mandate with new Wireless Internet Council

The Canadian Wireless Telecommunications Association (CWTA) has unveiled its newest plan to expand the lobby group's membership and influence across a variety of communications sectors. Following the lead of its counterpart in the United States, the CWTA has opened its membership to mobile data companies, and established a Wireless Internet Council.

Airborne Entertainment CEO Garner Bornstein was elected chair of the Wireless Internet Council at its inaugural meeting in late May. Bornstein, whose company markets wireless games, says the wireless telecom landscape is changing, and so must the CWTA. By broadening its membership and mandate to include mobile data, he says the wireless association can expand beyond pure-play telecom companies and seek out businesses that rely on wireless networks to deliver their services.

"We're not just establishing a communication network now, we're now becoming enablers of a whole variety of content, services and transactions," Bornstein told *Report on Wireless*.

As a first priority, the council needs to bolster its ranks with companies that specialize in creating content. "That's my main goal over the next few weeks, to bring five or six young, dynamic members who can really bring a perspective of 'hey we've got much more we can do here than just enable people to talk to each other'," explains Bornstein.

Three-pronged strategy

Helping the wireless data industry grow is the ultimate mandate of the council. It plans to accomplish this through a three-pronged strategy that focuses on awareness, enablement and "revving up" the industry.

Bornstein says they want to put out the word that what's taking hold in Europe and Japan – such as using the cell phone to buy pop from a vending machine or banking from a wireless device – can and will happen here. Offering such services on a mass consumer basis, however, necessitates that the carriers work together to ensure that wireless data services are not hindered by competing standards on the various networks.

In addition to interoperability, the other major challenge facing the industry is developing a sustainable billing and collection system. "Billing is going to be a huge issue in terms of trying to find a way to allow people to plug in, because until companies can provide services (for which the fee) flows through onto the carrier's bill in a fairly simply way, it's going to be tough to rev up the industry," he says.

Bornstein says the limited size of the Canadian wireless market gives companies here an advantage over foreign competitors. Having only four national carriers makes reach-

Members of the Council

Garner Bornstein (Chair),
CEO - Airborne Entertainment
Simon Blake-Wilson
Director, Business Development - Certicom
Robert Blumenthal
VP, Internet Services - TELUS Mobility
Bryan Boyd
President & CEO - TeraGo Networks Inc.
Ron Dekker
President, Wireless Division -Ericsson Canada Inc.
David Farnes
VP, Industry and Regulatory Affairs - CWTA
Christine Gauthier
Director, Wireless Internet Market Development - Nortel Networks
Allan Gilchrist
President - Nokia Products Limited
Brant Jeffery
President and CEO - Celeratis
Robert Koven
President and CEO - Liazon Communication Solutions
Stéphane Lemay
Executive Director, Corporate Affairs - Inukshuk Internet Inc.
Ted Maksimowski
President & CEO, Bell Mobility Investments
Brian Milton
VP, Business Development - Airborne Entertainment
David Neale
Vice President - Rogers AT&T Wireless
Rob Plume
Senior Account Manager - Kyocera
Sharon Prizant
President - Mipps Net Online 1998 Inc.
Dennis Terry
General Manager - SaskTel Mobility

Wmode launches first phase in clearing-house model for wireless content providers

Wmode Inc has signed up the first nine partners to a new program that makes it easier for content providers and portals to collect money for their wireless services by piggybacking on a carrier's existing billing system (see list). Announced May 28, the *ClearMode Clearinghouse* program provides a high-speed and secure method for managing subscriptions to premium content offered on mobile devices.

The next step for the Calgary-based company is to ink a definitive agreement with a wireless carrier so that the content can be made available to its subscribers. Such a deal isn't expected to happen until later this year (RoW, Feb. 19/01). Earlier this year, Emanuel Bertolin, Wmode VP of marketing told *Report on Wireless* that beta trials with a carrier will begin in the third quarter with full commercial deployment in the fourth.

The clearinghouse methodology has been likened to that of i-Mode in Japan that now has more than 23 million subscribers. It enables the subscriber to access various types of content for a nominal subscription fee charged by the content provider which then appears on the users' monthly phone bill.

Hopes are that by enabling content providers to monetize access to content and secure a regular revenue stream, more compelling content will be developed for the wireless Internet.

RoW

Initial content partners

Galileo International: Through its Galileo Wireless(tm) service, travellers can view all booked itineraries, flight information, schedules and car and hotel bookings from their cell phones, PDAs or pagers.

10Best.com: Recommends the "ten best" businesses in a variety of dining, lodging, and lifestyle categories in cities around the world.

AllAfrica.com: Provides more than 500 news stories daily from more than 80 African media organizations and from its own reporters.

ContactLive.com: Produces proprietary TV shows, concerts and movies, and broadcasts them with the latest in streaming video Web technology.

CyberFab.net and SemiconductorNews.net: CyberFab.net provides semi-daily industry news on semiconductors. SemiconductorNews.net provides interactive and personalized content and applications to people with handheld devices and Internet-enabled phones.

File@Will.com: A server side program allowing WAP access to your computer and selected files.

Funcaster.com: A wireless entertainment application provider whose product offering includes games, greeting cards, cartoons, jokes and poetry.

Joefrocks.com: Provides users with analysis of growth stocks, market strategy, stock tips.

MyFrenz.com: Creates a virtual community of realistic life-like characters for digital entertainment.

ing a consensus on issues like interoperability and billing more possible. "We have an opportunity to leapfrog other parts of the world because it would be very difficult to achieve what we're trying to achieve in the United States where they have 50 or 60 carriers," he says.

Once all the "hard" pieces of the puzzle are in place, revving up the industry will be the next challenge. That will involve getting enough content players making their services or products available over wireless networks. To do that, wireless companies will need to develop a structure that makes it easy for all content companies to plug into, regardless of their product or service.

While Bornstein admits there are still challenges left to overcome, movement in support of a uniform approach is mounting. "The challenges in wireless are there, but there's a lot of momentum and interest by everyone concerned to come together and enable this industry," he says.

"It's a big jig saw puzzle and the pieces all exist," he adds, "and now it's a question of putting them together and doing it in such a way that you don't have a hodge podge of technologies."

RoW

People On The Move

COM DEV International Ltd has appointed **Michael Pley** as president of the company's space division. He replaces **John Keating** who was previously promoted to the role of COO. Pley will be responsible for all of COM DEV space's operations including the company's main design and manufacturing facility in Cambridge ON and its European space centre in Aylesbury UK. He had held various positions within the company since 1983 but for two years was VP and GM at Unitron Industries Ltd. Prior to this posting, he was VP space programs and other roles occupied by Pley were VP operations and director of payload electronics.

Sierra Wireless Inc has promoted two of its senior officers. **David Sutcliffe** has been named chair and CEO, while **Glen Brownlee** has been named president and COO. Brownlee had served as executive VP and COO since joining the company in January 2000. Sutcliffe had served as president and CEO since joining the company in May 1995.

Donna Ronayne has been appointed VP business development at BitFlash, an emerging graphics player for the mobile space. Ronayne brings a wealth of knowledge to the table with more than 15 years of sales and marketing experience. Prior to joining BitFlash, she held the position of VP marketing at Manta Corp and prior to that posting, she was director of marketing at QNX Software Systems Ltd.

Wallace Read, a former chair at the Canadian Centre for Marine Communications, has been inducted as a fellow into the Canadian Academy of Engineering. He served as chair of the CCMC from its beginning in 1989 to his retirement in 2001. Additionally, **Prakash Bhartia**, a former board member of CCMC, has also been inducted into the Academy. He served on the board from 1992-1996.

Kenneth Goldstein has been named executive VP and chief strategy officer at CanWest Global. He is currently president at Communications Management Inc, a consulting firm he founded in 1975. He is well-known for the FuturePlan, a blueprint for the future of Canadian broadcasting industry issue by the Canadian Association of Broadcasters.

NEWSMAKERS

Optical wireless users should pay more attention to eye safety ratings of systems

Issues of eye safety are set to become a topic of contention among optical wireless equipment vendors in the months ahead as equipment based on the emerging technology gets deployed. The Free-Space Optics Alliance, which will hold its inaugural meeting at WCA 2001 in Boston later this month, will surely address the subject. The problem as it stands is that most vendors claim their products to be eye safe when it's not necessarily the case.

David Kahn, VP product development at Plaintree Systems, an optical wireless equipment vendor, sets the record straight.

Optical wireless (OW) or Free Space Optics (FSO) is the newest contender in the race to provide affordable last mile connections that can bring the multimedia Internet into the home and office. It uniquely combines the power of fibre with the convenience of wireless while avoiding leasing, licensing or spectrum planning hassles.

Telecom carriers, ISPs and institutions are all eyeing the prospects and possibilities of optical wireless but are facing a battery of conflicting claims about the hazards to the eyes of inadvertently staring at the invisible beams. Predictably, all vendors claim that their systems are eye-safe, but a little research reveals that there is more to the issue than meets the eye!

A review of the market will show that products carry a variety of designations that are all showcased as being synonymous with eye-safe. These designations are typically "Class 3A", "Class 3B" or "Class 1M". What is invariably unstated is the fact that all these designations imply that the products are potentially dangerous to the eyes. Only one designation, Class 1 tells that the product is safe under all foreseeable conditions. All the other classes are hazardous to varying extents.

The danger is that powerful invisible beams could enter the eye and concentrate within it, causing heating and possible lesions resulting in both temporary and permanent sight impairments. For operators who plan to use systems designated other than Class 1, the challenge is to quantify the level of risk. What are the chances that anyone can get into the path of the beam? What are the chances that they will then stare into the beam? What are the chances that they will be using binoculars, increasing the hazard level 50 times?

There will be situations where the optical path is entirely under the control of the operator and the risk management is then much easier. But in other situations, this will not be the case and the fact that the chances of injury are very low will not serve as an effective defence in a court of law. Operators will also rightly be concerned to avoid putting installation and maintenance personnel at risk especially where binoculars or gunsights are required for alignment.

There are two prime types of optical wireless systems, those employing lasers and those employing LEDs (Light Emitting Diodes). They differ considerably in several respects including eye hazards. Laser light is far more dangerous to the eyes than LED light of the same power because the eye is able to focus laser light to a point resulting in a very high power concentration. In contrast, LED light being from an extended source cannot be focussed down so much.

The International Electro-technical Commission standard IEC 60825-1 is the authoritative reference for eye safety and addresses both lasers and LEDs. It defines the various designations and hazard levels associated with products and specifies what steps must be taken to identify them and protect users and the public. The standard implies that the maximum safe power level entering the eye directly from a LED transmitter can be up to 10 times greater than that from a similar laser transmitter. In January this year, the standard was updated, introducing the Class 1M rating that by definition applies to systems dangerous to view when using optical aids such as binoculars. Such systems require a warning notice or label.

Most laser wireless products fall under a Class 3 category with a few in the new Class 1M category. They are therefore hazardous to varying degrees. LED wireless products generally fall under the Class 1 category and are therefore safe under all foreseeable conditions.

EDITORIAL

One of the most daunting challenges for the telecom industry over the next couple of years will be to ensure that a subscriber's personal information doesn't fall into the hands of people with malicious intent.

With the increased use of the Internet, both wireless and wired, to conduct various types of transactions, the amount of personal information residing in far-flung databases is expanding at exponential rates.

Much of this information is being used by savvy marketing specialists targeting a certain segment of society for a specific item or service. In the years to come, more of this will be done over wireless networks and subscribers will begin receiving ads on their phones. Done in a tactful manner, this can be a helpful service.

To a major degree the integrity of personal information has been taken care of with the new Privacy Act which came into effect this year. But doubts still remain in the public's mind, especially when talking about conducting financial transactions online.

Incidents of credit card numbers being hacked from a retailer's website are all too common and a better job needs to be done to maintain a high level of security.

Personal data can obviously be a valuable commodity in the hands of unscrupulous people. And sometimes it's more than just personal information that can be exposed to the general public at large. Last week, a website was broadcasting live conversations of analog cell phone users. And to the surprise of many, it wasn't illegal. While we only have Mike Smith's assertion that he wasn't trying to gain anything from the posting of the conversations, we do have to remain skeptical.

As much as increased security measures or even the elimination of online retailing all together can solve the problem, fraud can still happen in the old fashion way.

As I recently discovered, it's relatively easy for someone to get a hold of your driver's licence and credit card numbers, open an account with one of the country's wireless operators and then rack of hundreds of dollars in phone calls. Next time you rent a car, ask the attendant how they make sure your information is protected from falling into the wrong hands.

Perry Hoffman
Editor